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USE OF TIME-STAMPED HOSPITAL DATA TO EXAMINE CARE PATTERNS OF ACUTE CORONARY SYNDROME PATIENTS UNDERGOING PERCUTANEOUS CORONARY INTERVENTION

Wang C[1], He J[1], McCollam PL[2], Bae JP[2], Griffin BT[1]
[1]Solucient, Inc, Berkeley Heights, NJ, USA; [2]Eli Lilly and Company, Indianapolis, IN, USA

OBJECTIVES: Quality improvement initiatives in acute coronary syndrome (ACS) such as CRUSADE have found marked increase in treatment guideline adherence during the past several years. This descriptive study used time-stamped data to examine pharmacologic treatment and laboratory biomarker utilization patterns in ACS patients who underwent percutaneous coronary intervention (PCI). **METHODS:** The data source consisted of 19 hospitals throughout the U.S. that used time-stamp data from January 2003–September 2004. ACS was identified in the dataset using ICD-9 diagnosis codes for unstable angina and/or myocardial infarction (MI). The time-stamp allowed more precise measurement of drug administration and biomarker sampling. Biomarker definition of MI was CK-MB >3 times upper limit of normal, troponin I and myoglobin >1 times upper limit of normal. **RESULTS:** A total of 6,282 ACS patients who had been given clopidogrel were identified with adequate time-stamp information. The most common recorded comorbid diagnoses were ischemic heart disease 91.2%, hypertension 54.4%, lipid disorder 57.9%, and diabetes 21.7%. Aspirin (ASA) plus clopidogrel was received by 75.9% of patients and initiated on the day of PCI in 88.3% of patients. The majority of initial ASA plus clopidogrel administration was minus (–) 10 to plus (+) 14 hours from PCI. GPIIb/IIIa inhibitors were received by 68.6% and statins by 73% of patients, respectively during hospitalization. Post-procedure (>8 hours after PCI) biomarker monitoring (CK-MB, troponin I or myoglobin) was performed in 67.9% of patients. The majority of testing was CK-MB or troponin I. Results suggestive of MI were found in up to 67% of patients. **CONCLUSIONS:** This novel examination of ACS treatment using time-stamped data found ASA, clopidogrel; GPIIb/IIIa inhibitors and statins were often used in this cohort. A wide range of initial administration time for ASA plus clopidogrel around PCI was found. Post-procedure biomarker monitoring occurred frequently and was often positive.

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THIENOPYRIDINE THERAPY IN ACUTE CORONARY SYNDROME PATIENTS RESIDING IN GERMANY

Lage MJ[1], McCollam PL[2], Bae JP[2]
[1]HealthMetrics Outcomes Research, LLC, Groton, CT, USA; [2]Eli Lilly and Company, Indianapolis, IN, USA

OBJECTIVES: The European Society of Cardiology consensus treatment guidelines in 2002 support use of clopidogrel in many ACS patients for secondary prevention of cardiac events. This study is to examine clopidogrel patterns of use in acute coronary syndrome (ACS) patients in Germany. **METHODS:** The data source was the IMS Health, Disease Analyzer Mediplus-German database, containing approximately 4.2 million de-identified patient records from approximately 1000 participating practices. The analysis period was January 1, 2001-September 1, 2004. The index ACS event was identified using ICD-10 codes for unstable angina or acute myocardial infarction. Patients were included if they had ≥3 months of data before and 6 months after an index ACS event and ≥1 prescription for clopidogrel after the event. **RESULTS:** Of the 28,688 patients included in the ACS cohort, 748 had at least one clopidogrel prescription (2.6%) and met inclusion criteria. Mean age was 67.5 years; 68% were male. The mean number of recorded comorbidities was 7.4. High cholesterol, hypertension, angina, ischemic heart disease, and diabetes were most common. The recorded mean length of clopidogrel therapy was 41 days. 74% of patients stopped therapy, defined as not on clopidogrel 28-days prior to end of follow-up. A gap in therapy, defined as late refills >14 days apart, was seen in 89%. Concomitant cardiovascular drug therapies included: calcium channel blocker (20.3%), beta-blocker (69.1%) and statin (64.7%). **CONCLUSION:** This descriptive study suggests clopidogrel is underutilized in ACS patients and long-term adherence to therapy was poor as demonstrated by stoppages or gaps in therapy.

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THE EFFECT OF GENDER ON HEALTH-RELATED QUALITY OF LIFE AFTER CORONARY STENT IMPLANTATION

Brüggenjürgen B[1], Mcbride D[2], Willich SN[1]
[1]Charité—Universitätsmedizin Berlin, Institut für Sozialmedizin, Epidemiologie und Gesundheitsökonomie, Berlin, Germany; [2]Universitätsmedizin Berlin, Charité, Berlin, Germany

OBJECTIVE: The need for treatment of cardiac disease in women can go unrecognised and access to appropriate health care can be limited. We evaluated the effect of gender on changes in long-term health-related quality of life (HRQoL) after coronary stent implantation (CSI) in conventional treatment of coronary artery disease (CAD). **METHOD:** In this prospective comparative multi-centre cohort study in Germany, patients with CAD undergoing coronary angioplasty were electively treated with stents. Standardised questionnaires were completed by patients at baseline, 3, 6, 12, and 18 months following angioplasty and documented patient health-related (SF-36) and disease-specific (MacNew heart disease questionnaire) quality of life, as well as clinical outcomes. **RESULTS:** From April until August 2004, 103 women (16%, mean age 66, b11) und 546 men (mean age 64, b10) were treated with CSI. There were no significant differences in socio-demographic factors, cardiovascular risk factors and severity of CAD. At baseline, all aspects of HRQoL evaluated by SF-36 and MacNew were significantly poorer in women than in men ($p = 0.004$). Three months following stent implantation, the difference in improvement in the SF-36 aspects of general health ($p = 0.005$), role emotional ($p = 0.034$) and the mental summary score ($p = 0.027$) was significantly greater in women than in men, although their actual HRQoL remained significantly lower in most aspects. After 6 months, the difference in improvement in women was significantly greater to baseline in the aspect of role emotional than men ($p = 0.019$). Gender differences in improvement were not demonstrated in the follow-up MacNew questionnaires. **CONCLUSIONS:** In comparison to men, baseline HRQoL in women may be lower before receiving CSI treatment. However, three and six months following implantation of a coronary stent, the difference in improvement in many aspects of HRQoL was greater in women than in men. Women may have a wider range of potential improvement after coronary stent implantation than men.

PCV40

HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH CORONARY HEART DISEASE: A STUDY USING EQ-5D QUESTIONNAIRE

De Portu S[1], Monzini M[2], Galietti M[3], Mantovani LG[2]
[1]University of Naples, Naples, Italy; [2]Center of Pharmacoeconomics, Milan, Italy; [3]University of Milan, Milan, Italy

OBJECTIVES: Coronary heart disease (CHD) is nowadays the most frequent cause of mortality and morbidity in industrialized countries. In Europe it accounts for around two million deaths

per year. CHD may adversely impact on the Quality of Life. The objectives of the study were to describe Health-Related Quality of Life (HR-QOL) in subjects with CHD and to compare their health state with the health state of subjects without CHD. **METHODS:** We selected subjects with CHD (Cases) from a representative sample of the Italian general population aged from 40 to 79 years, enrolled in a population based naturalistic prospective survey. We matched each of them by age and sex with subjects without CHD disease (Controls). EuroQoL (EQ-5D) was used to evaluate HR-QOL. We used Chi Square Test to evaluate differences in the five dimensions of the EQ-profile between the two groups. Paired sample T test was used to evaluate differences in EQ-VAS. **RESULTS:** We analyzed two groups of 98 subjects per group. The mean age was 64.7 (SD 8.6) years, (69.4%) were male. More problems were reported in cases than in controls in the mobility dimension, usual activities, and self care and anxiety/depression dimensions. These differences proved statistically significant. Whereas in pain/discomfort domain there was no significant difference between the two groups. Mean values of the visual analogue scale assessing global health status indicated by case and control were 68.1 and 66.94, respectively (P = 0.005). **CONCLUSION:** The study, comparing subjects of the same age and sex with and without CHD, suggests that the presence of CHD is associated with higher problems in HR.

PCV41

PORTUGUESE ACTIVE POPULATION HEALTH RELATED QUALITY OF LIFE RESULTS USING THE SF-6D

Ferreira LN[1], Ferreira PL[2]

[1]University of Algarve, Faro, Algarve, Portugal; [2]University of Coimbra, Coimbra, Coimbra, Portugal

OBJECTIVES: This study aims to describe the health related quality of life (HRQOL) of the Portuguese population and investigates sociodemographic differences. **METHODS:** Subjects randomly selected from the Portuguese active population (n = 2459) were assessed using the SF-36, a generic measure of HRQOL, which was converted into the preference-based SF-6D, following the Brazier algorithm. Although the sample was randomly selected, it differed slightly from the whole population. In order to correct this, post-stratified statically techniques were used to weight the initial results by gender and age, according to the population values. **RESULTS:** Mean global utility SF-6D scores were 0.70, and ranged from 0.73 (18–24 years) to 0.63 (55–64 years). The mean utility scores were 0.17 lower in the lower educational level than in the higher educational level ($p < 0.000$). Women, people living in rural areas and the elderly reported lower levels of utility scores. Nonparametric tests showed that health utility values were significantly related to employment ($p < 0.000$): the unskilled manual workers (0.68) reported lower utility values than the non-manual workers (0.74). For different diseases mean utility scores ranged from 0.66 (hepatitis) to 0.56 (stroke). This study was able to achieve normative data by age and gender for the SF-6D. Using QALYs as outcome measures, the difference between unskilled manual workers and non-manual workers would be equivalent to a difference of 4902€ in annual income. In this line of thinking, the difference between lower educational level and higher educational level would be equivalent to a difference of 13,889€ in annual income. **CONCLUSION:** We conclude that the SF-6D is an efficient tool for measuring the HRQOL in the community, so that different population groups can be compared. The preference-based utility measure used seems to adequately discriminate across different sociodemographic differences, showing that the HRQOL varies greatly between sociodemographic groups.

PCV42

RECENT TREND IN MANAGEMENT OF HYPERCHOLESTEROLEMIA AND GOAL ATTAINMENT

Goettsch WG

PHARMO Institute for Drug Outcomes Research, Utrecht, The Netherlands

OBJECTIVES: To evaluate current lipid management practice in The Netherlands and estimate the impact of new guidelines of the European Society of Cardiology (ESC) on cholesterol goal attainment. **METHODS:** Data were obtained from a sample of the PHARMO system that includes complete medication, hospital admission and clinical lab assessment data of 80,000 Dutch residents. Patients starting lipid lowering drug (LLD) therapy between 2002–2004 who had a baseline TC measurement in the six months prior to initiation of therapy and had at least one TC measurement after the start of therapy were included. Goal attainment was compared using the ESC 1998 and ESC 2003 guidelines. For both guidelines goal attainment was in general defined as TC <5 mmol/l during LLD treatment. However, in the ESC 2003 guidelines goal attainment was defined as TC <4.5 mmol/l during LLD treatment for patients with cardiovascular disease or diabetes. Doses of statins were expressed in equipotencies based on TC lowering capabilities. **RESULTS:** The study sample comprised of 623 patients (43% females). Most patients (83%) were initiated on statin monotherapy of at least an equipotent dose of four (simvastatin 20 mg or equipotent statin). Overall TC goal attainment rate based on 1998 guidelines was 59% and based on new ESC guidelines was 49%. Goal attainment in patients with cardiovascular disease or diabetes changed from 69% to 49% based on old and new guidelines respectively. Our results also indicated that persistent statin use during follow-up increased goal attainment (54% versus 44% in not persistent patients using new ESC guidelines). **CONCLUSIONS:** Though lipid management in recent years has become more aggressive, achievement of cholesterol goals based on the new ESC guidelines is relatively low. Therefore there is a need for highly effective lipid lowering therapies that are also well tolerated in order to achieve sufficient persistence.

PCV43

IMPACT OF NEW EUROPEAN (ESC 2003) GUIDELINES ON TREATMENT OF HYPERCHOLESTEROLEMIA IN DAILY PRACTICE

Goettsch WG

PHARMO Institute for Drug Outcomes Research, Utrecht, The Netherlands

OBJECTIVES: To compare lipid management and reductions in total cholesterol (TC) levels among patients initiated on lipid lowering drugs (LLD) in recent years (2002–2004) to those initiated in earlier years (1991–2001). **METHODS:** Data were obtained from a sample of the PHARMO system that includes complete medication, hospital admission and clinical lab assessment data of 80,000 Dutch residents. Patients starting LLD therapy and having a baseline TC measurement within six months prior to therapy initiation as well as at least one measurement after the start of therapy were included in two study cohorts. One cohort included patients who initiated therapy in 2002–2004 and another that initiated therapy in 1991–2001. Goal attainment was defined as TC <5 mmol/l during LLD treatment according to Dutch guidelines. Statin dosage was expressed in equipotencies based on TC lowering capabilities. **RESULTS:** Patients with cholesterol levels <6 mmol/l were more likely to be treated in the period 2002–2004 than in the period 1991–2001 (27% versus 15% of all patients, respectively). Furthermore, equipotent dose at the start of statin monotherapy gradually